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10/605,962

11/10/2003

Kurt Kolb

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10/31/2006

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EXAMINER

JONES, HUGH M

ART UNIT

PAPER NUMBER

2128

DATE MAILED: 10/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | | |
|------------------------------|------------------------|--|---------------------|--|
| Office Action Summary | Application No. | | Applicant(s) | |
| | 10/605,962 | | KOLB ET AL. | |
| | Examiner | | Art Unit | |
| | Hugh Jones | | 2128 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 and 21-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-10 is/are allowed.
- 6) ☒ Claim(s) 11-16, 21-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2904 42304 31705</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-16, 21-24 of U. S. Application 10/605,962, filed 11/10/2003, are pending.

Claim Interpretation

2. Claims 3-5, 7-8 do not invoke 112(6) paragraph because these claims limit the structure of preceding claims.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 23-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. How is it possible to compare flight data without storing or recording it, even temporarily?

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 11-16, 21-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Galipeau et al.

7. Galipeau et al. discloses :

11. A method of transmitting aircraft data from an aircraft comprising the steps of:

(a) receiving digital flight data from an aircraft data bus or a discrete input or both (fig. 11-12 [note the flight data in the center of fig. 12]; col. 11, line 48 to col. 12, line 67);

(b) storing the data to a flight data file (fig. 11-12 [note the flight data in the center of fig. 12]; col. 11, line 48 to col. 12, line 67);

(c) creating a summary file of flight data or a portion of flight data in binary or text format upon a specified event or command (fig. 11-12 [note the flight data in the center of fig. 12]; col. 11, line 48 to col. 12, line 67);

(d) transmitting the summary file in the form of an email or attached to an email via a radio transmitter, or a satellite modem and transceiver (fig. 11-12 [note the flight data in the center of fig. 12]; col. 11, line 48 to col. 12, line 67).

12. The method of claim 11 further comprising the step of receiving the email at a ground centre and storing the summary file in a database (fig. 11-12 [note the flight data in the center of fig. 12]; col. 11, line 48 to col. 12, line 67).

13. The method of claim 12 further comprising the step of forwarding the email to a user (fig. 11-12 [note the flight data in the center of fig. 12]; col. 11, line 48 to col. 12, line 67).

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14. The method of claim 13 further comprising the step of creating and transmitting a second email to a user containing or attaching a data file (fig. 11-12 [note the flight data in the center of fig. 12]; col. 11, line 48 to col. 12, line 67).

15. The method of claim 11 further comprising the step of storing the flight data file onto a removable non-volatile memory (fig. 11-12 [note the flight data in the center of fig. 12]; col. 11, line 48 to col. 12, line 67).

16. The method of claim 15 wherein the removable non-volatile memory comprises a solid-state memory card (fig. 11-12 [note the flight data in the center of fig. 12]; col. 11, line 48 to col. 12, line 67).

21. The method of claim 11 further comprising the step of encrypting the summary file (fig. 11-12 [note the flight data in the center of fig. 12]; col. 11, line 48 to col. 12, line 67).

22. The method of claim 11 further comprising the step of providing user access to the summary file by Internet (t-ITTP or HTTPS), private network or VPN (fig. 11-12 [note the flight data in the center of fig. 12]; col. 11, line 48 to col. 12, line 67).

23. A method of monitoring data from an aircraft, comprising the steps of

(a) receiving flight data which may comprise digital data and/or an aircraft event (fig. 11-12 [note the flight data in the center of fig. 12]; col. 11, line 48 to col. 12, line 67);

(b) monitoring flight data and comparing flight data to a rules database, without recording or storing digital data, wherein the rules database defines at least one aircraft data storage

condition (fig. 11-12 [note the flight data in the center of fig. 12]; col. 11, line 48 to col. 12, line 67); and

(c) storing the digital data into a memory upon the flight data matching the aircraft storage data condition (fig. 11-12 [note the flight data in the center of fig. 12]; col. 11, line 48 to col. 12, line 67).

24. The method of claim 23 wherein the rules database further comprises at least one aircraft data condition and a related action to be taken, wherein the related action to be taken is chosen from the group consisting of: creating a data file, recording data to a data file, closing a data file, saving a data file to a memory, or creating and sending a data file by email (fig. 11-12 [note the flight data in the center of fig. 12]; col. 11, line 48 to col. 12, line 67).

8. Claims 11-13, 15, 22-24 are rejected under 35 U.S.C. 102(b) as being anticipated by United States Patent 6,092,008 by Wesley H. Bateman herein "Bateman".

9. Bateman teaches **an aircraft data transmission system comprising: (a) monitoring and collecting aircraft data; (b) formatting the data or a portion of the data as a binary or text file; (c) incorporating the binary or text file into an email message; (d) transmitting the email; and (e) communication for carrying the email transmission to a ground station.** Bateman teaches a "flight event record system" that is capable of monitoring and collecting the aircraft data [Column 4 Lines 54-67, Column 5 lines 55-62]. Applicant claims a means for formatting data as binary and

means for incorporating the binary into e-mail message. Bateman teaches formatting and sending the collected data as a binary (digital) file (data) from one computing device to another by means of computers networks (aircraft to ground stations) [Column 7, Lines 59-67, Column 8 Lines 1-3, Column 11 Lines 58-67]. In addition, Bateman teaches the means for transmitting the e-mail as per paragraph [0036] in the applicant specifications which states that the means for transmitting the e-mail consists of transmission of text messages between two computing devices over a computer network. Bates teaches transmitting a binary data between the onboard "Flight Event Recording Monitor" FERMONT and the ground based receiving stations via many different forms of communication techniques including a cellular modem [Column 7 Lines 56-57 and Column 8 lines 1-9]. It is well recognized that a cellular communication system (cellular modem) contains a Short Message System (SMS) which allows for the two computing devices (cell communicators) to transfer binary data (text) via the computer network (cell towers).

10. Bateman teaches **the system of further comprising a GPS receiver** [Column 4 Lines 19-29, Column 8 Lines 10-21 (G.N.S.S is analogous to GPS) Figures 1,2,3].

11. Bateman teaches **the system wherein the communication comprises a satellite modem and transceiver** [Column 4 Lines 41-45, Column 5 Lines 26-28, Column 11 lines 30-35 and 57-67, Figures 2 and 3] Bateman teaches employing a

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modem for the communication between the "flight event recorder system" and the satellite/ground.

12. Bateman teaches **the system wherein the for monitoring and collecting aircraft data comprises at least one aircraft databus interface**. Bateman teaches "Flight Event Recording Monitor (FERMONT)" that acts as a central processing gathering and transmitting the data received from the aircraft monitoring sensors [Column 7, Lines 60-67, Column 8 lines 33-43, Column 10 Lines 27-32, Figure 2 and 3].

13. Bateman teaches **the system wherein the monitoring and collecting aircraft data further comprises at least one discrete input interface**. Bateman teaches employing video cameras connected to the "Flight Event Recording Monitor (FERMONT)" [Column 7, Lines 40-64, discrete inputs can be seen in Figure 2].

14. Bateman teaches **the system wherein the binary or text file comprises a summary of the aircraft data or a portion of the aircraft data**. Bateman teaches digitally (binary) transmitting the status of the aircraft from one computing device to another [aircraft to ground/satellite] by means of computer networks [Column 7 lines 60-67, Column 8 Lines 1-10, Column 11 Lines 58-67]. Also, the communication between the FERMOT device and ground station was designed to transfer aircraft status (summary) data [Column 11 Lines 30-54].

15. Bateman teaches **the system wherein the means for monitoring and collecting data comprises random access memory and a removable non-volatile memory.** [Column 9 Lines 60-65, Column 11 Lines 20-53, Figure 3].

16. Bateman teaches **the system further comprising a rules database comprising a plurality of aircraft data conditions and related actions, means for monitoring aircraft data and comparing aircraft data to the rules database.**

Bateman teaches the "Flight Event Recording Monitor (FERMONT)" that monitors the aircraft for any events that surpass a "normal" threshold. Once such event(s) occurs the event(s) is/are recorded in FERMONT and transmitted to the ground monitoring station [Column 9 Lines 33-39, Column 10 Lines 15-39].

17. Bateman teaches **the step of receiving the email at a ground centre and storing the summary file in a database** [Column 7 lines 65-67 and Column 8 lines 1-9]. Bateman teaches transmitting a binary message from one computing device to another by means of computer networks (between aircraft and the ground center) [Column 7 lines 60-67 and Column 8 line 1 and Column 11 Lines 58-67] and then storing the received data [Column 7 lines 60-67 and Column 8 lines 1-10].

18. Bateman teaches **the method further comprising the step of forwarding the email to a user** [Column 8 lines 1-9].

19. Claim 15, Bateman teaches **the step of storing the flight data file onto a removeable non-volatile memory** [Column 9 Lines 60-65, Column 11 Lines 20-53, Figure 3].

Claim Rejections - 35 USC § 103

20. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
- Considering objective evidence present in the application indicating obviousness or nonobviousness.

21. Claims 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent 6,092,008 by Wesley H. Bateman herein "Bateman" in view of applicant own disclosure ¶[0036].

22. Bateman teaches forwarding the data file **further comprising the step of creating and transmitting** a data file (e-mail well known in the art). Bateman fails to mention that a **second email to a user containing or attaching a data file** is transmitted. However, Bateman does not exactly specifies the number of messages/files that are being transmitted to other servers/users. In addition, Bateman teaches that the data regarding the aircraft status is being transmitted to other servers/users [Column 7 lines 60-67, Column 8 Lines 1-10, Figure 1]. Also, in paragraph 0036 of the applicants' specifications the applicant defines the email as "text messages transmitted from one computing device to another by means of computer networks." Whereupon, Bateman teaches employing a cellular telephone link to communicate with the servers/users, it is well known in the art that the cellular telephone contains a Short Message System "SMS" which allows for text files to be transferred between two computing devices (cellular phone) over a computer network (cell towers). Therefore, it would have been obvious to one of ordinary skill in the art that Bateman might as well employ more than one e-mail message (data transmission with data file/text message) during the communication process (multiple communications during the flight).

23. Bateman teaches **the method further comprising the steps of (a) monitoring aircraft data and comparing aircraft data to a rules database wherein the rules database defines at least one aircraft data condition and a related action; and (b) taking the action upon the aircraft data matching the aircraft data condition.**

Bateman teaches the "Flight Event Recording Monitor (FERMONT)" along with "Flight Event Recording System (F.E.R.S)" that monitors the aircraft for any events that surpass a "normal" threshold (Alert/Alarm System Fig 3. 216,220). Once such event(s) occurs the event(s) is/are recorded in FERMONT and transmitted to the ground monitoring station [Column 8, Lines 33-45, Column 9 Lines 33-39, Column 10 Lines 15-39, Figure 2,3]. It would have been obvious to one of ordinary skill in the art at the time of the invention to realize that since FERMONT along with F.E.R.S record and monitor any event that surpasses a "normal" threshold then the "normal" threshold is a rule stored in the "database" to which the monitor data is compared to and decided if the new data does or does not warrant an "Alert/Alarm Event" [Column 9 Lines 33-39, Column 10 Lines 15-39, Figure 2,3].

24. Bateman teaches **the method wherein the action to be taken is chosen from the group consisting of: creating a data file, recording data to a data file, closing a data file, saving a data file to a memory, or creating and sending an data file by email** [Column 8, Lines 33-45, Column 9 Lines 33-39, Column 10 Lines 15-39, Figure 2,3].

25. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent 6,092,008 by Wesley H. Bateman herein "Bateman" in view of Applicant and further in view of United States Patent Application Publication 2001/0036822 A1 by Stephen E. Mead et al. herein "Mead."

26. Bateman teaches employing data compression and decompression system during the communication process. Bateman fails to explicitly teach **encrypting the binary or text file**. However, Mead teaches an "In-flight E-mail System" employing compression and/or encryption system during transmission between the aircraft and the ground based server [Mead, [0023]]. It would have been obvious to one of ordinary skill in the art to realize that since Bateman teaches compression and it is known in the art that the compressed data does not resemble the original data rendering the original data unreadable without decompression (can be thought of as encryption) and Mead teaches compression and/or encryption of data. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Bateman with the teachings of Mead in order to enhance the data security during wireless transmission.

27. Claims 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent 6,092,008 by Wesley H. Bateman herein "Bateman" in view of Applicant and further in view of United States Patent 4,644,494 by Hans R. Muller herein "Muller."

28. Bateman teaches a removable non-volatile storage device [Column 9 Lines 60-65] but Bateman fails to explicitly teach that **the removeable non-volatile memory comprises a solid-state memory card**. However, Muller teaches employing a "solid state memory for aircraft flight data recorder systems." Therefore, it would have been

obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Bateman with the teachings of Muller in order to reduce the weight and the initial cost of the memory employed in the "flight data recorder" [Muller, Column 1 Lines 41-50].

Allowable Subject Matter

29. Claims 1-10 are allowed over the prior art of record and will be allowed once all rejections/objections are traversed.

30. Claim 1 is in proper "means for" formation - the material in fig. 3, as arranged, is novel and non-obvious over the prior art of record. Therefore claims 1-10 are also considered novel and non-obvious over the prior art of record.

Response to Arguments

31. Applicant's arguments, filed 8/11/2006, have been carefully reviewed, but are not persuasive.

32. The objection to the "means for" claims are withdrawn.

33. Applicant's argument against Bateman is that Bateman discloses the capability to transmit many different formats, not only text or binary files. Arguments about compression and continuous vs intermittent transmission are also not persuasive. Bates discloses the capability to transmit data continuously, *if necessary* in order to handle large amounts of data (wherein compression would ease the burden on the system). Applicants argue that they only want to transmit less data, "as events warrant". The Bateman transmission system could also transmit less data as warranted. Applicants

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are also reminded that the specification states (paragraph [0036] in the specification) discloses that the means for transmitting the e-mail consists of transmission of messages between two computing devices over a computer network; in other words, basic communication between computers. Applicant's argument pertaining to an alleged distinction between digital and binary files is not understood.

Conclusion

34. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

35. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

36. **Any inquiry concerning this communication or earlier communications from the examiner should be:**

directed to: Dr. Hugh Jones telephone number (571) 272-3781,

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Monday-Thursday 0830 to 0700 ET,

or

the examiner's supervisor, Kamini Shah, telephone number (571) 272-2279.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist, telephone number (703) 305-3900.

mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:


(703) 308-9051 (for formal communications intended for entry)

or (703) 308-1396 (for informal or draft communications, please label *PROPOSED* or *DRAFT*).

Dr. Hugh Jones

Primary Patent Examiner

October 17, 2006


HUGH JONES PH.D.
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